

# Putting the Trees Back in the Forest: E-Resource Usage Statistics and Library Assessment

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Longwood University  
ER&L, March 18-21, 2008, Atlanta, GA

# Outline

- Introduction
- E-Metrics Landscape
- Constant E-Metrics Data Sets
- E-Metrics and Library Assessment
- Challenges

# Longwood University



- Master's I
- State supported
- 4,000+ FTE
- Growing graduate and online programs

# Greenwood Library



- 330,000 volumes
- 7 librarians, 18 FTE support staff
- 12,000 e-books
- Access to over 22,000 e-journals
- Flat budget for past ten years
- Major changes in past five years

# Greenwood Library FY 04-05



**Fall 2004**

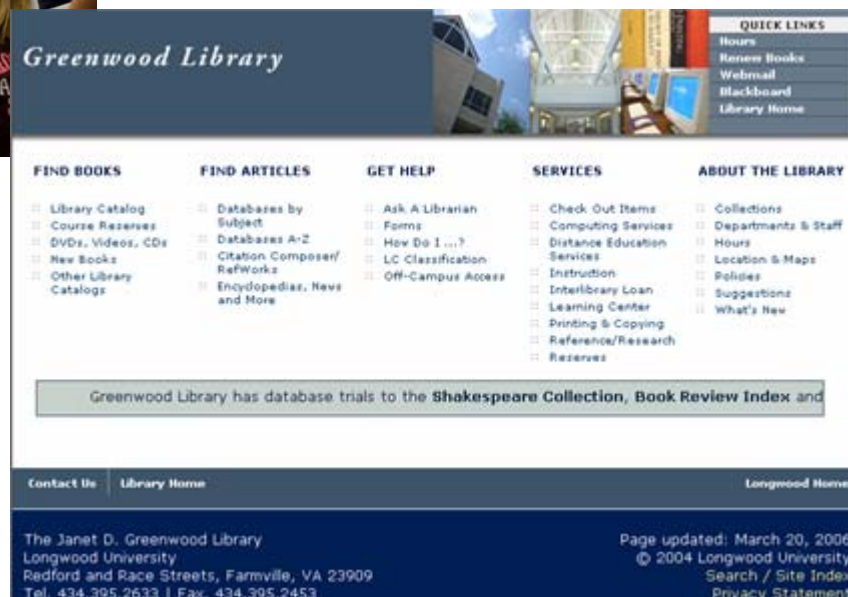
Information Commons

Web Site Redesign

**Spring 2005**

Electronic Reserves

ILLiad



# Greenwood Library FY 05-06

The screenshot shows the Longwood University Greenwood Library Online Catalog interface. At the top, there's a header with the university and library names. Below it, a navigation bar includes links for ONLINE CATALOG, KEYWORD, AUTHOR, TITLE, NUMBER, RESERVES, OTHER SEARCHES, and FEATURED LISTS. A search bar is prominently displayed with the prompt "Type your SEARCH WORDS here:". To the left of the search bar, there's a sidebar with links for Services, Renew Books, Journal Finder, Find Books, Find Articles, and Get Help. Below the search bar, there's a section for "Limit your search:" with dropdown menus for Format (Any, Audio CDs, Audiotapes, Books, CD-ROMs), Language (Any), and Location (Any). To the right of these dropdowns, there are checkboxes for "Limit to Available:" and "Sort By:" (set to Date), and input fields for "Year After:" and "Year Before:". A "SEARCH" button is located at the bottom right of the search area. At the very bottom, there's a footer with the library's address and contact information.

Longwood University | Greenwood Library

ONLINE CATALOG

KEYWORD AUTHOR TITLE NUMBER RESERVES OTHER SEARCHES FEATURED LISTS

Type your SEARCH WORDS here:

*Wild Cards* Use an asterisk to get multiple forms of the same root word, e.g., *comput\** *librar\* technolog\**

*Phrases* Multiple words are searched as a phrase, e.g., *library technology*. Use quotation marks to force a phrase, e.g., *"library technology."*

*Connectors* Use OR to broaden your search to retrieve either term, e.g., *robins OR canaries*. Use AND to narrow your search to retrieve both terms, e.g., *cats AND dogs*. Use parentheses to group multiple connectors, e.g., *(robins OR canaries) AND pets*.

Limit your search:

Format: Any Audio CDs Audiotapes Books CD-ROMs

Language: Any

Location: Any

Limit to Available: ☐

Sort By: Date

Year After:

Year Before:

SEARCH

The Janet D. Greenwood Library, Longwood University  
Redford and Race Streets Farmville, VA 23909 tel. 434.395.2633



Fall 2005

Link Resolver

Library Catalog Redesign

Spring 2006

RefWorks



# Greenwood Library FY 06-07

Fall 2006

Database Listing Change

## HISTORY DATABASES

Use these general databases to get an **overview** of your topic.

**InfoTrac OneFile** 1980 - present **Full Text**

Provides comprehensive access to an extensive collection of journals, newspapers, magazines, and newswires. Includes all the fulltext articles available in other InfoTrac databases as well as additional fulltext articles.

**LexisNexis Academic** 1980's - present **Full Text**

Provides full-text documents from over 5,900 news, business, legal, medical, and reference publications with a variety of flexible search options.

**Wilson OmniFile Full Text Select** 1994 - present **Full Text**

Provides full text, indexing and abstracts for 1,340 multidisciplinary magazines and journals.

Use the following databases for more **in-depth information** on history topics. To view an alphabetical list of all databases, see [Databases A-Z](#).

**Alternative Press Index** 1991 - present

Indexes journals covering cultural, economic, political and social change.

## A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

**Academic OneFile** 1980 - present **Full Text**

Provides indexing and full-text of peer-reviewed journals in the physical and social sciences, the arts, diversity studies, tourism, business, psychology, homeland security, and other subjects.

**Alternative Press Index** 1991 - present

Indexes journals covering cultural, economic, political and social change.

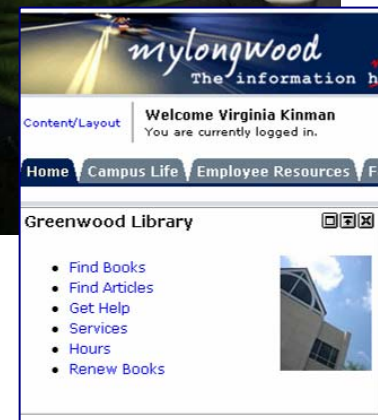
**America: History and Life** 1964 - present

Indexes journal articles on the history of the United States and Canada from prehistory to the present.

Spring 2007

Collaborative Learning  
Spaces Phase I

Campus Portal



# E-Metrics Landscape Global

## ■ Measurement Issues

- ☐ Data sources
- ☐ Standards
- ☐ User behavior
- ☐ Interface
- ☐ Open access



# E-Metrics Landscape Global

## ■ Impact Issues

- ☐ Federated search
- ☐ Link resolver
- ☐ Visibility
- ☐ Promotion
- ☐ RSS feeds and search alerts

# E-Metrics Landscape Global

## ■ Analysis Issues

- ☐ Budget decisions
- ☐ Student learning
- ☐ Big picture
- ☐ Time

# E-Metrics Landscape Local

rm\_qry\_pubswithstats Main Entry From

**Publisher** Proquest **Pub Code** Proquest

**Select a product:**

Prod_Name	Source
ABI/Inform	Proquest
PCI Full Text	Proquest
Proquest Historical Newspapers - New York Times	Proquest

**Enter statistics for selected product**

ID	Inst	Date	Searches	Sessions	Articles	Turnaways	Prod_Code
3222	LU	Sep-04	181		128		ABI Inform
2890	LU	Aug-04	55		71		ABI Inform
2884	LU	Jul-04	41		170		ABI Inform
2868	LU	Jun-04	30		129		ABI Inform
2728	LU	May-04	35		95		ABI Inform
2640	LU	Apr-04	304		272		ABI Inform

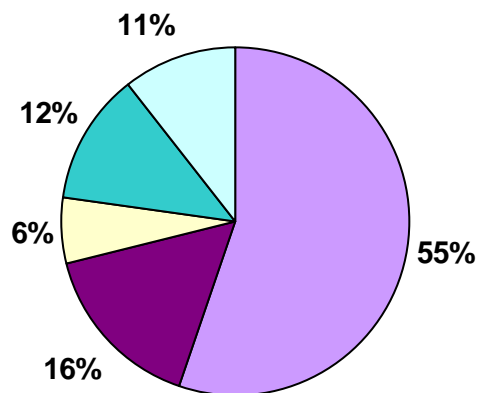
- ❑ Homegrown Access database
- ❑ Vendor statistics only
- ❑ Mix of searches, sessions, downloads and click-throughs
- ❑ Mix of COUNTER and non-COUNTER
- ❑ No statistics at all for some resources

# Electronic Resources By Year

Year	Resources
FY 03/04	104
FY 04/05	120
FY 05/06	139
FY 06/07	159

# Electronic Resources By Type

**All Resources (n=159)**

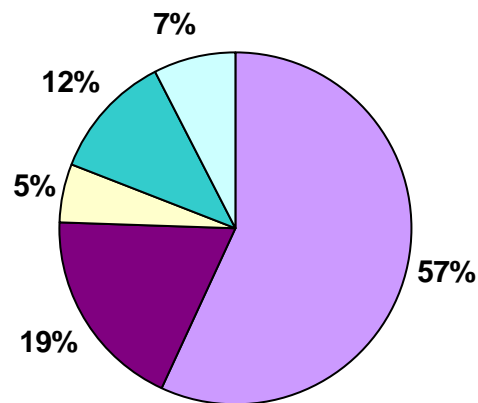


- Databases without FT journals
- Aggregators with FT journals
- E-book collections
- E-journal collections
- E-journal publishers

53,800 e-journal titles

9,170 e-book titles

**Resources with Statistics (n=135)**

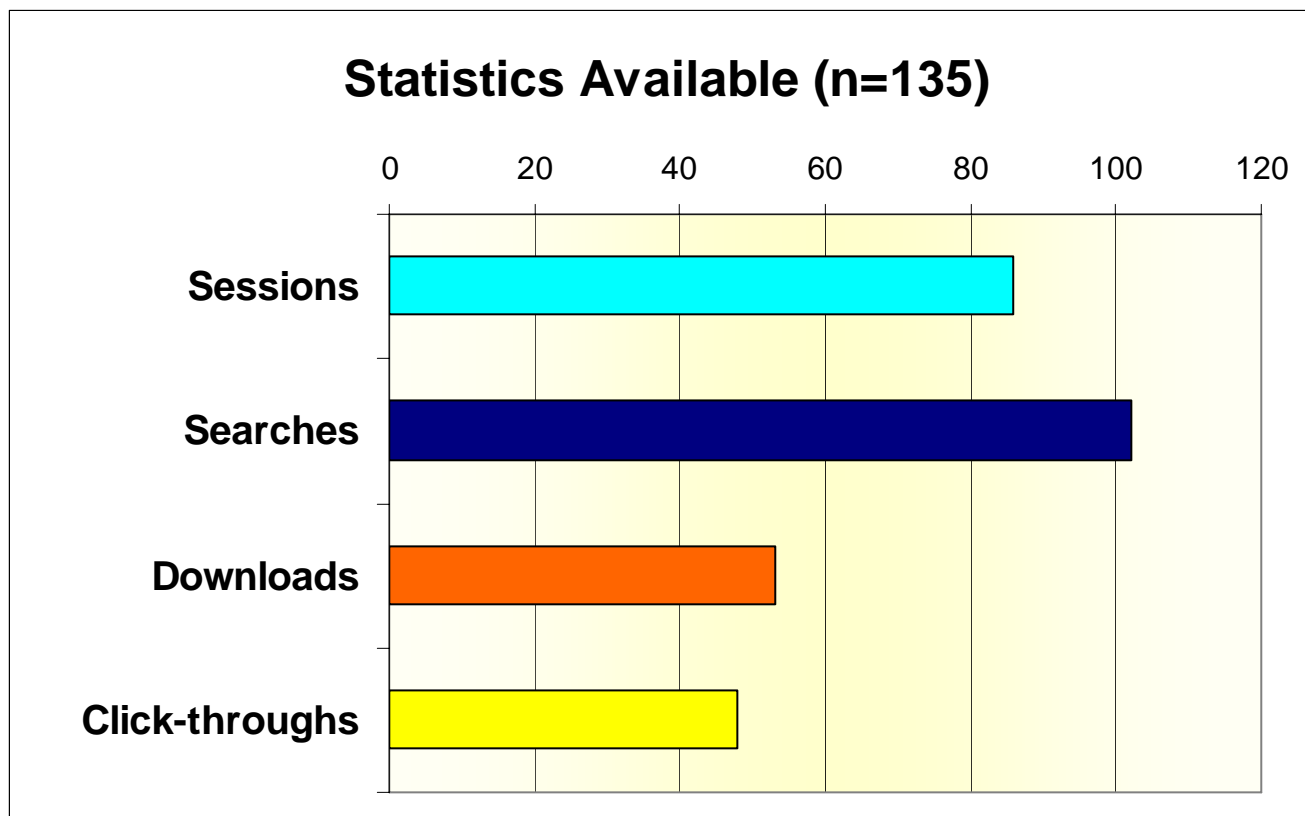


- Databases without FT journals
- Aggregators with FT journals
- E-book collections
- E-journal collections
- E-journal publishers

53,696 e-journal titles

2,009 e-book titles

# Electronic Resources By Metric







# Metrics, Types, Years, Oh My!

How can we compare maples to maples and oaks to oaks if we are reporting a variety of metrics for a different set of resources each year?



# Constant E-Metrics Data Sets

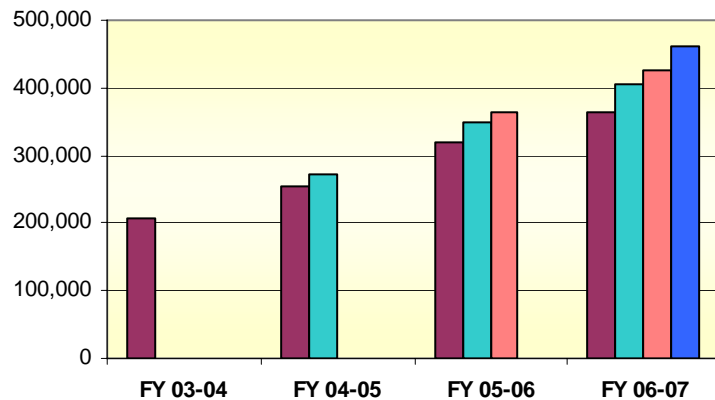
Identify constant resource sets for each year and COUNTER data metric.

		Searches	Sessions	Downloads
	4 years from 03/04	77	31	35
	3 years with new 04/05	84	60	42
	2 years with new 05/06	97	76	50
	1 year with new 06/07	102	86	53

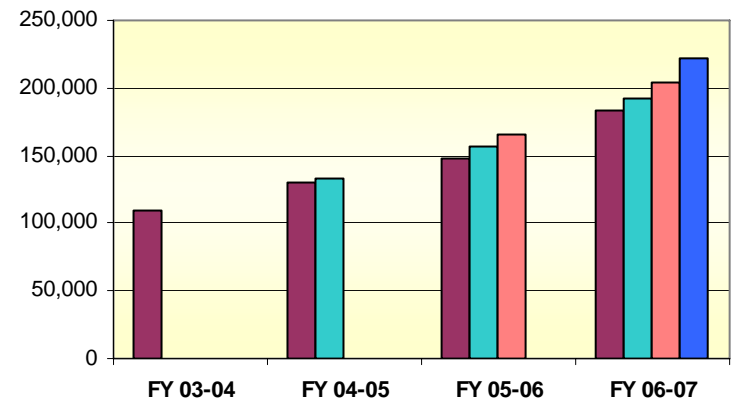


# COUNTER Data By FY

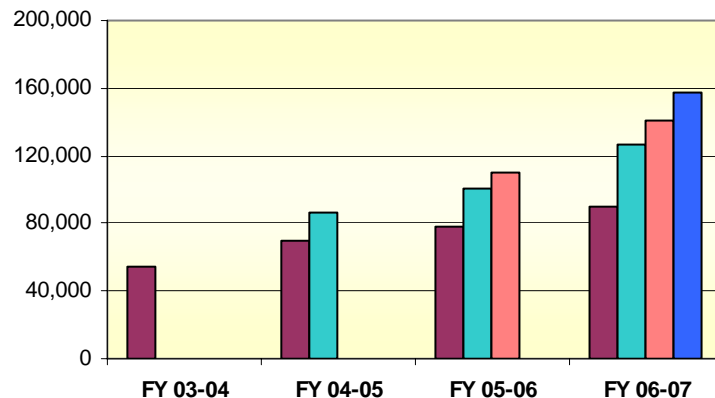
Database Searches by FY



Article Downloads by FY

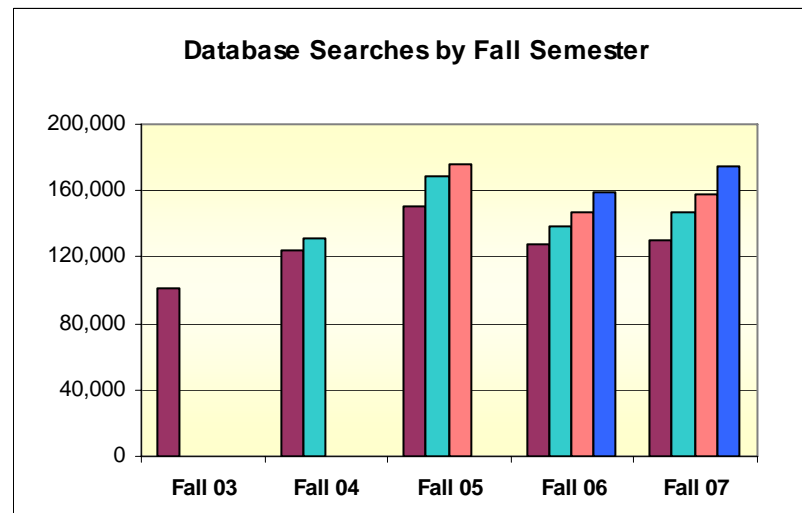
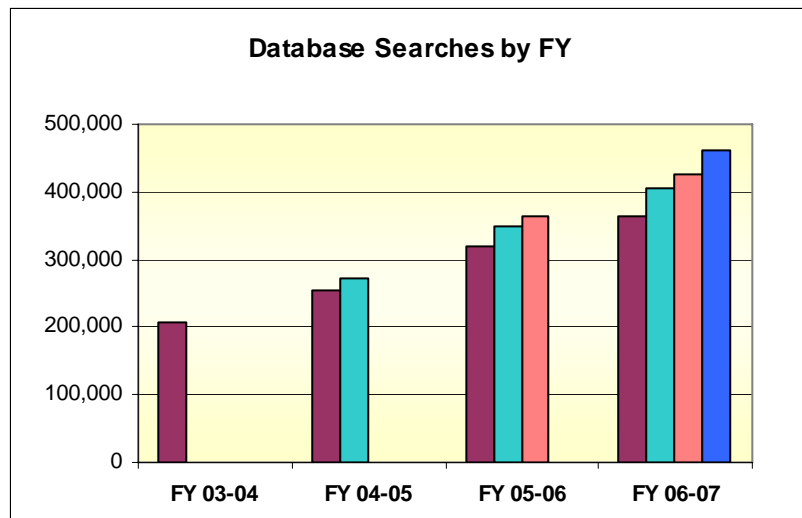


Database Sessions by FY



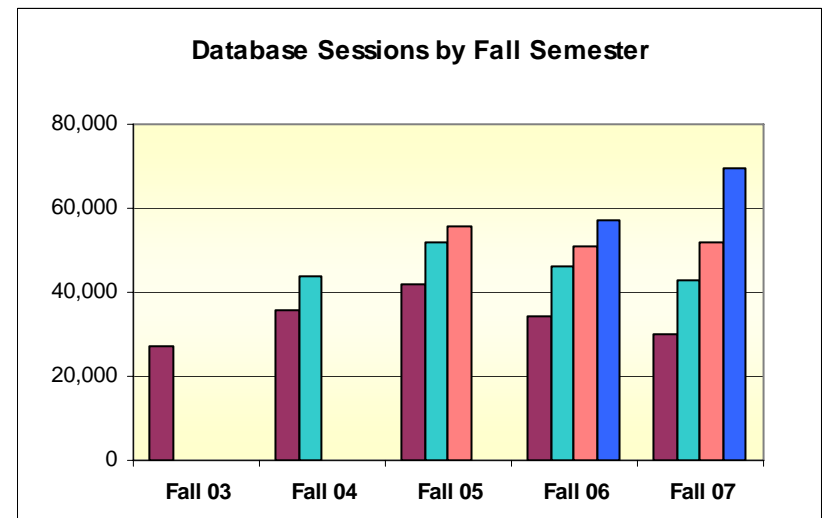
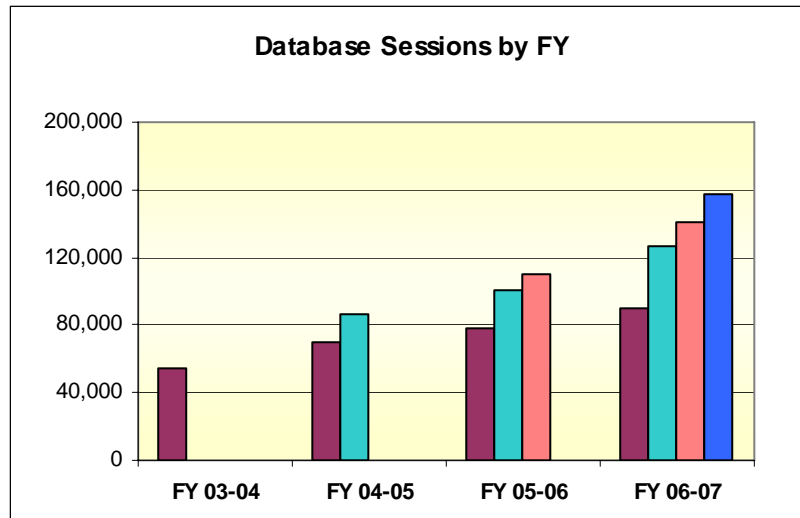
Upward trend for all metrics and data sets.

# COUNTER Searches



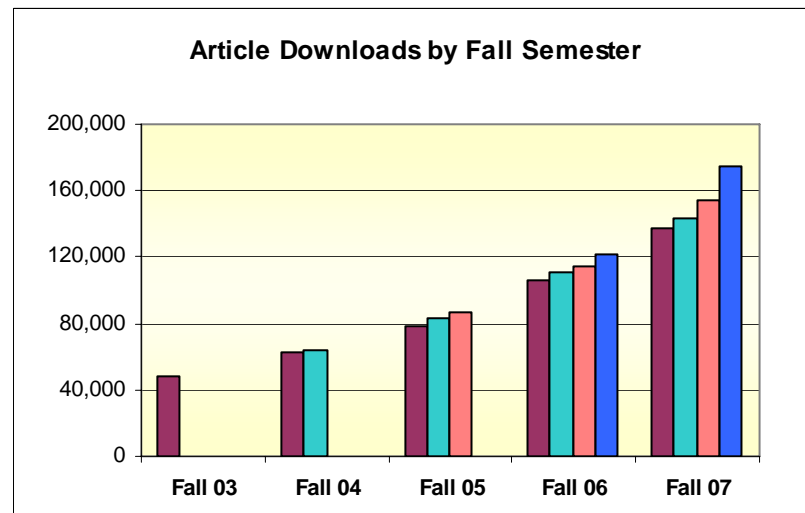
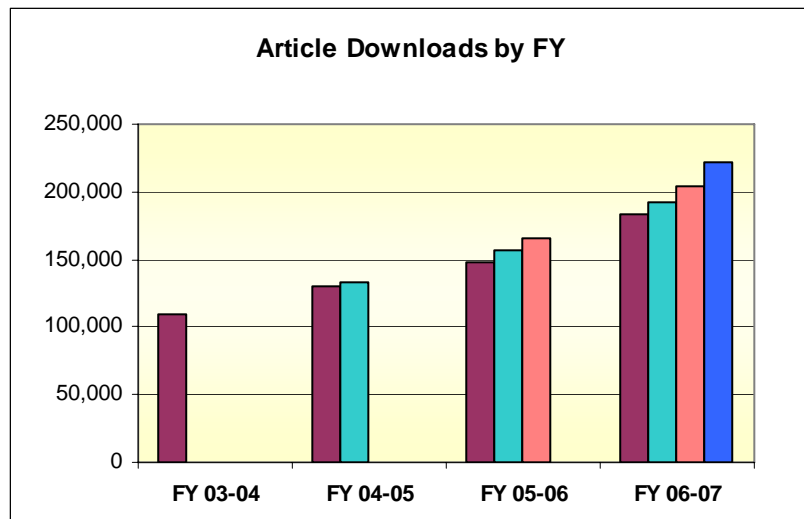
Drop in Fall 2006 of about 15% followed by slight increase in Fall 2007 for all data sets.

# COUNTER Sessions




Drop in Fall 2006 followed by  
apparent slight increase in Fall 2007.

# COUNTER Downloads

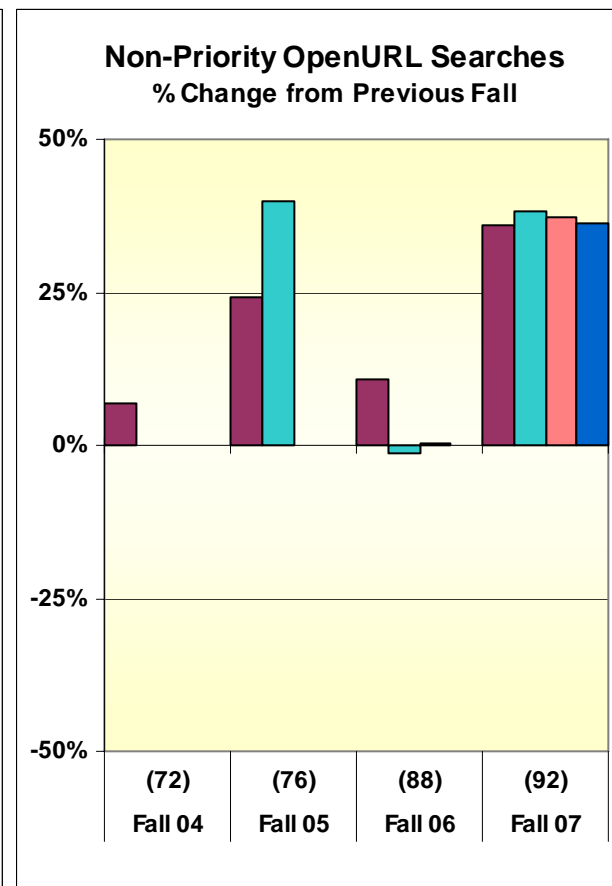
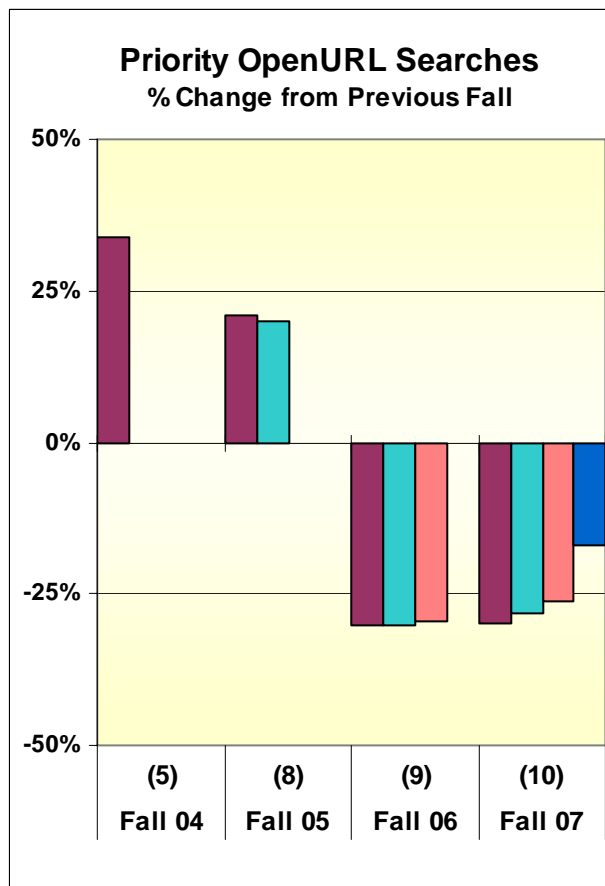
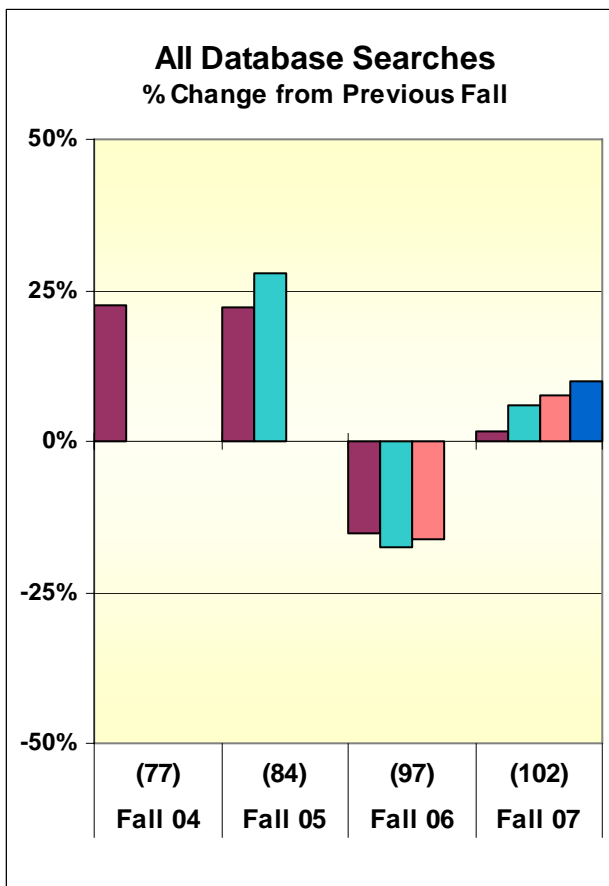


Steady increase in article downloads by FY and Fall.

# Link Resolver

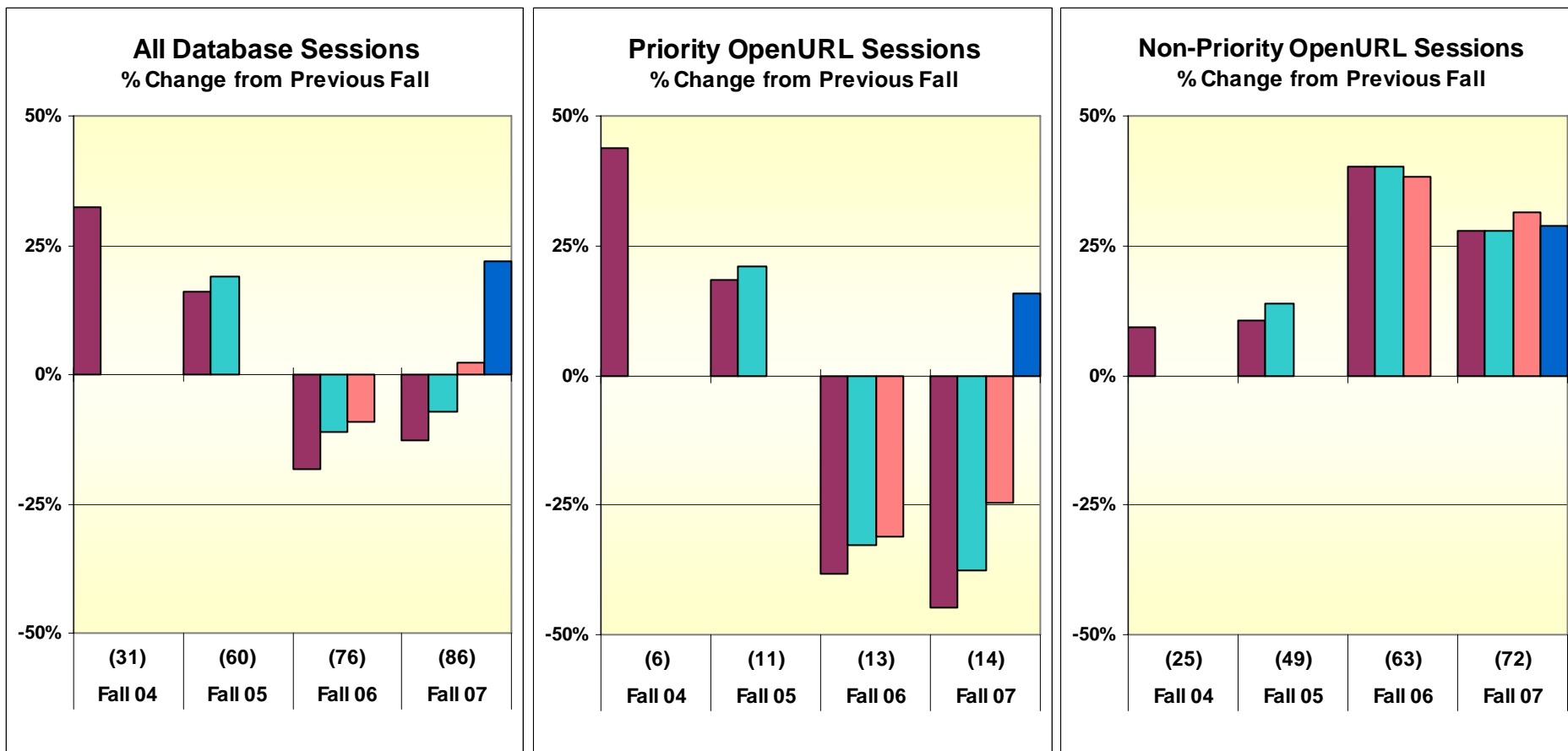
- Implemented Fall 2005. 
- About 40 databases with PDF format were given priority rank to display full text. Top five were:
  - JSTOR
  - Project Muse
  - Blackwell-Synergy
  - Wilson OmniFile
  - PsycArticles

# Link Resolver Searches



Decrease for priority resources in Fall 2006 accounts for almost all of the overall decrease in Fall 2006.

# Link Resolver Sessions



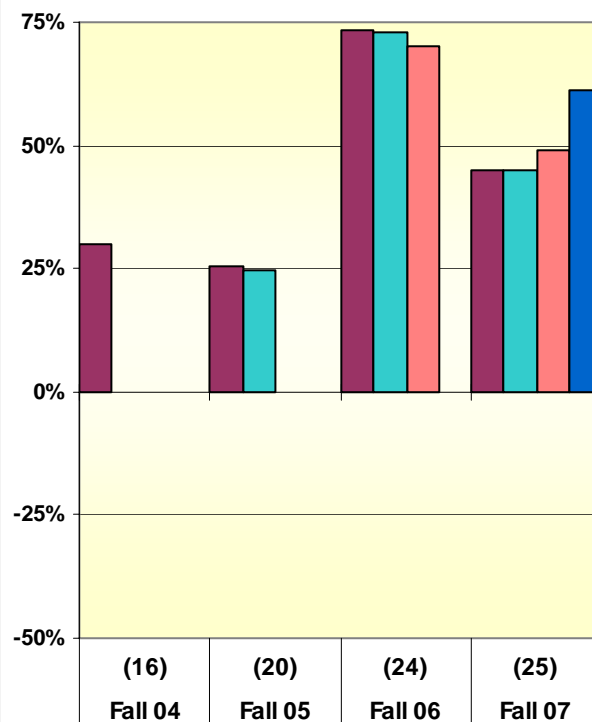
Somewhat similar pattern as for searches,  
with some differences.

# Link Resolver Downloads

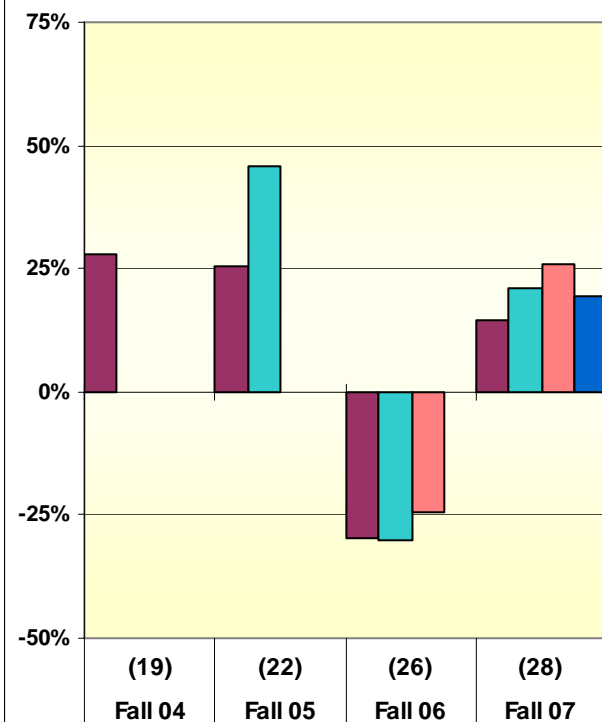
**All Article Downloads**  
% Change from Previous Fall



**Priority OpenURL Downloads**  
% Change from Previous Fall



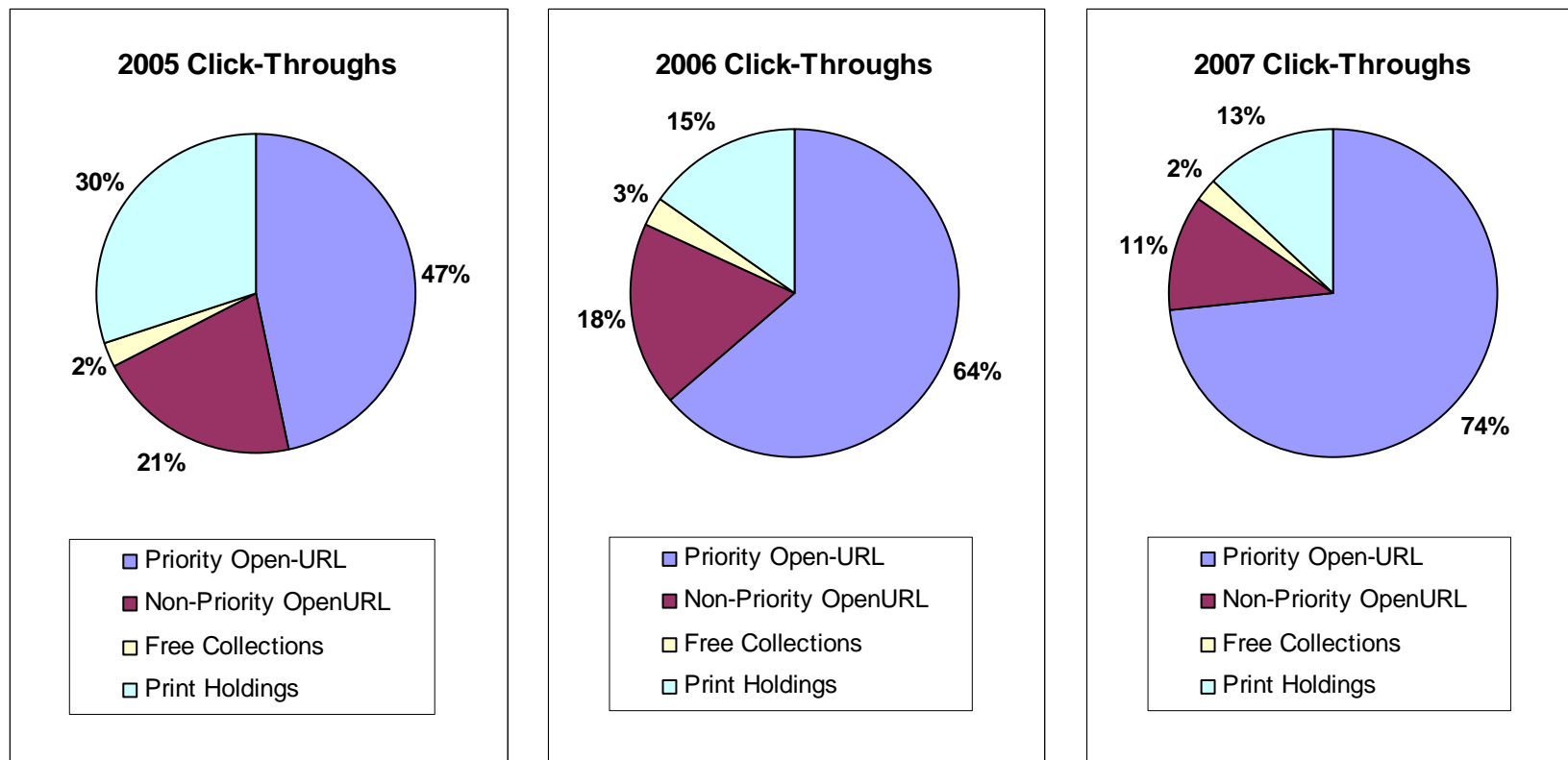
**Non-Priority OpenURL Downloads**  
% Change from Previous Fall



Significant increase in priority resources,  
with non-priority following the Fall 2006 drop trend.

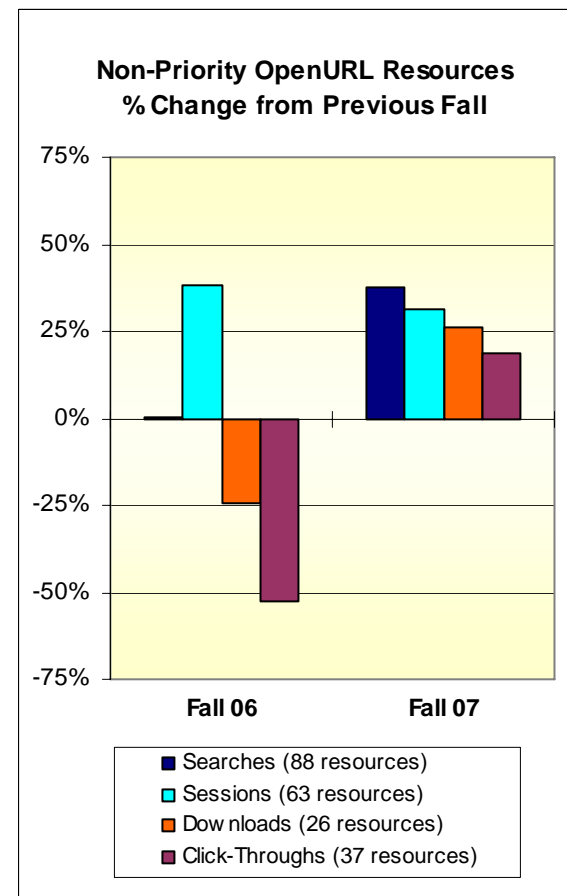
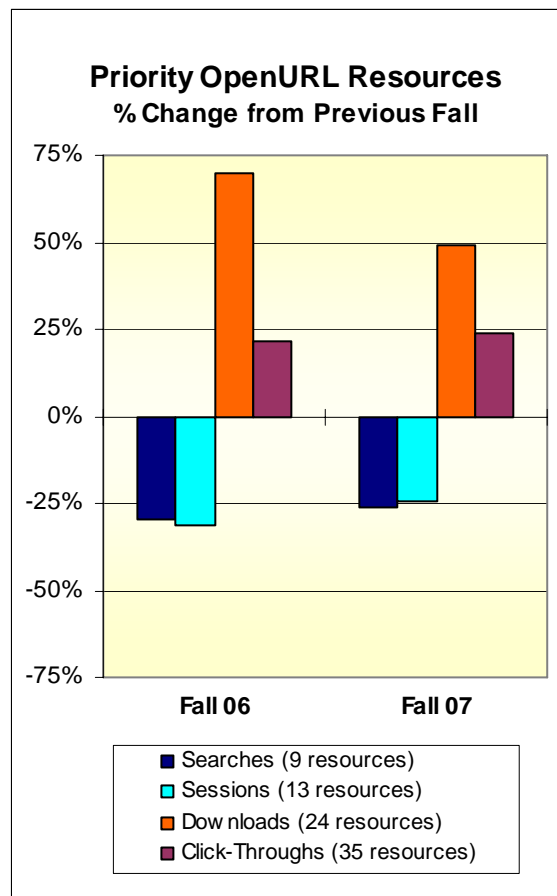
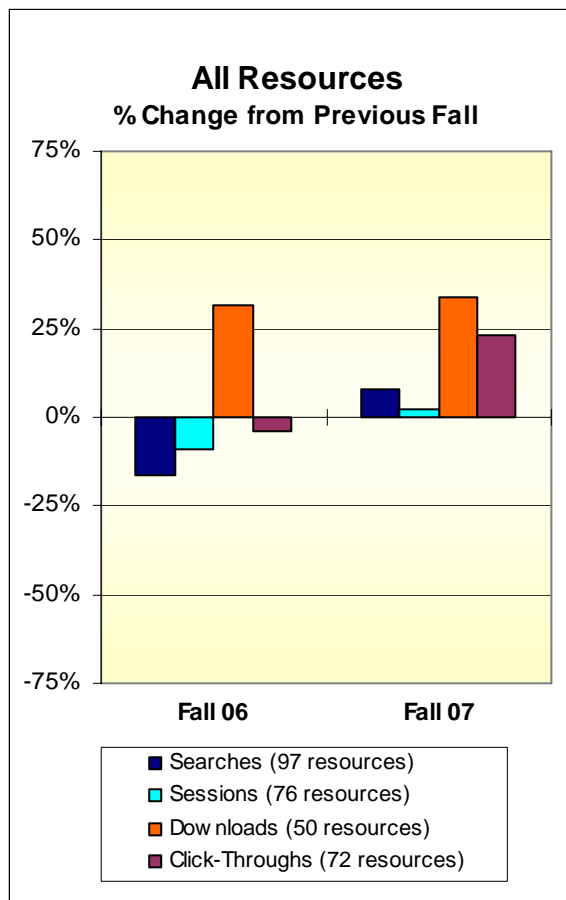


# Link Resolver Click-Throughs



Priority increase in 2006 mirrors  
Fall 2006 priority increase for article downloads.

# Link Resolver Overall Impact

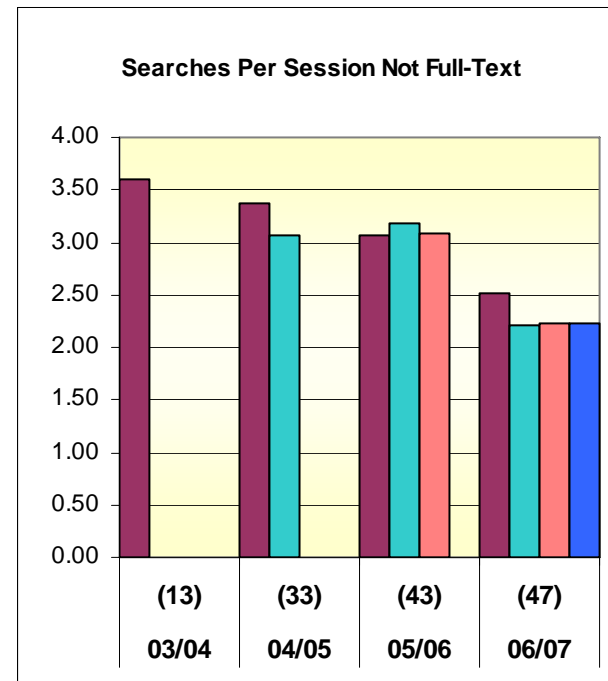
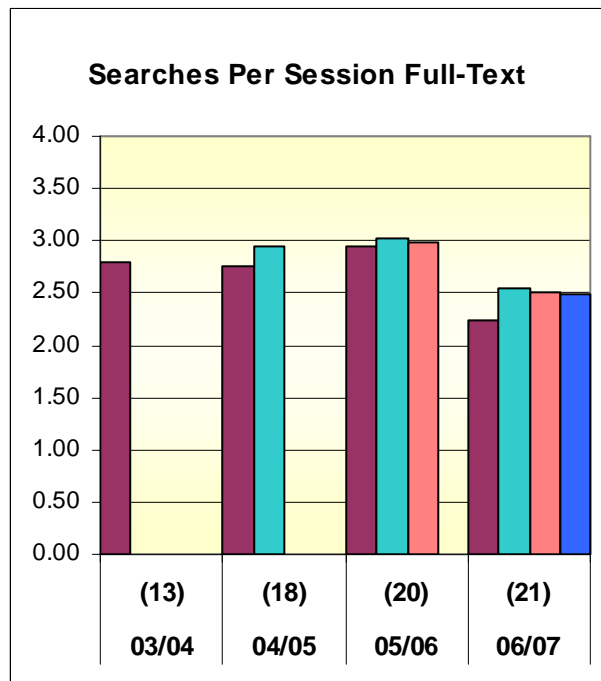
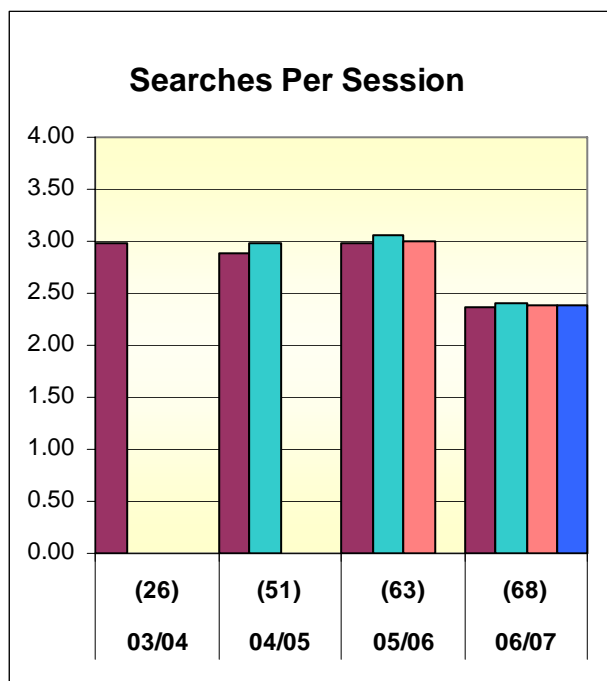


Downloads and click-throughs tend to increase, while searches and sessions follow similar patterns.

# Ratios

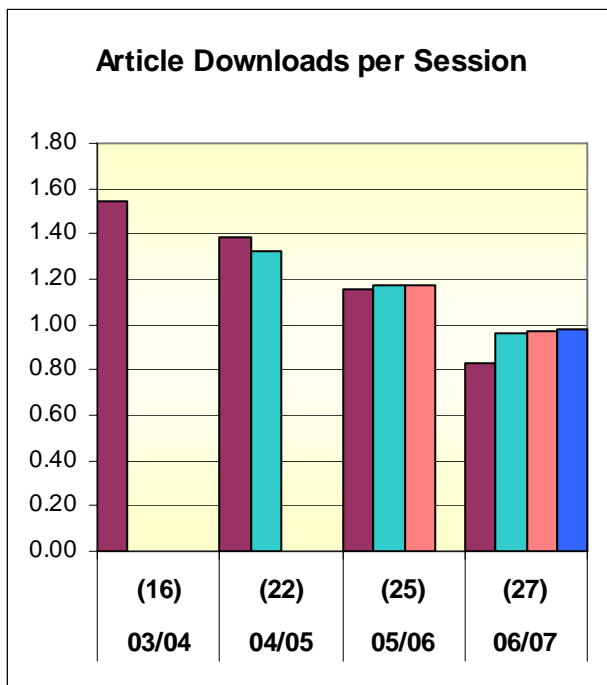
- **Searches per session** tends to be fairly stable over time unless there is a change in data collection or resource usage (Blecic et al. 2007).
- **Downloads per session** may or may not have meaning across databases (Ferguson 2005).
- **Downloads per FTE** has been shown to be consistent across publishers and institutions (Davis and Price 2006).

# Ratios Searches per Session

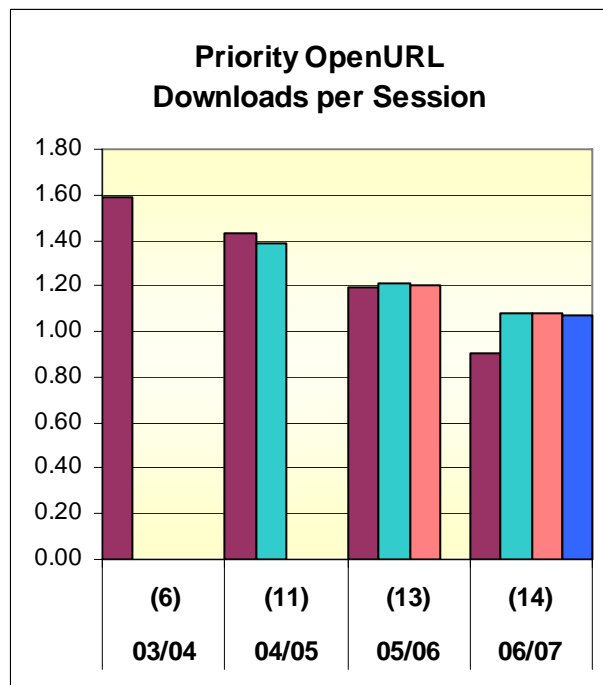


Decrease of at least 0.5 for all resources in FY06/07.

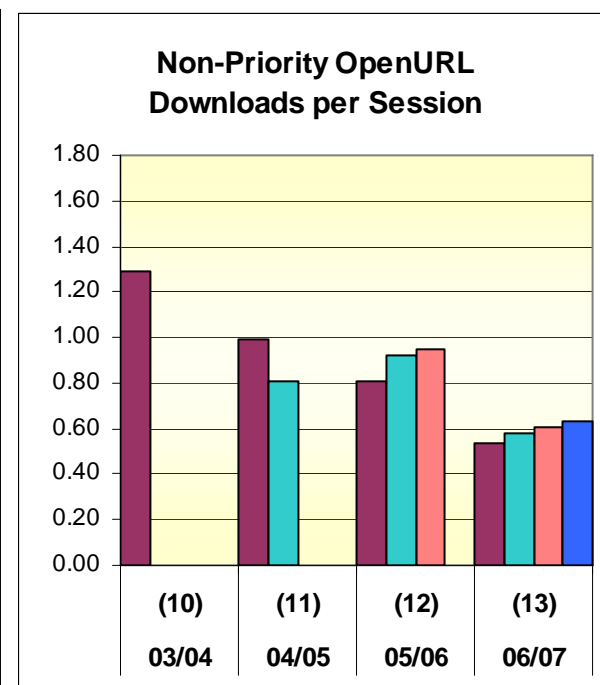
# Ratios Downloads per Session



24,000 to 31,000 journals



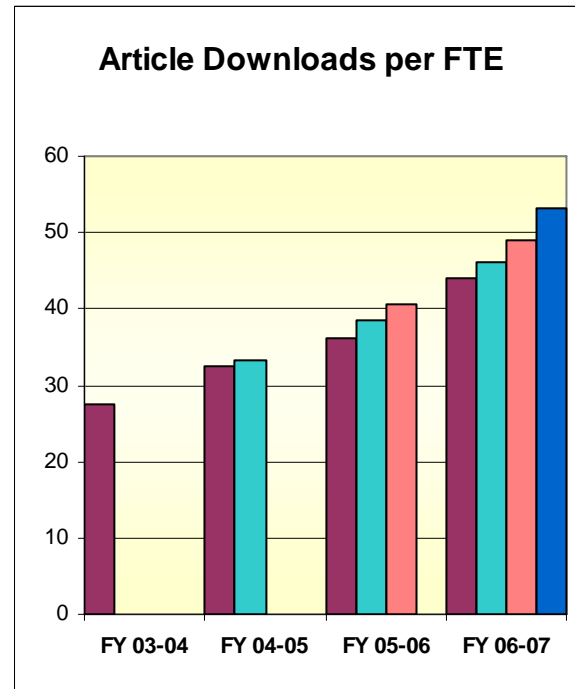
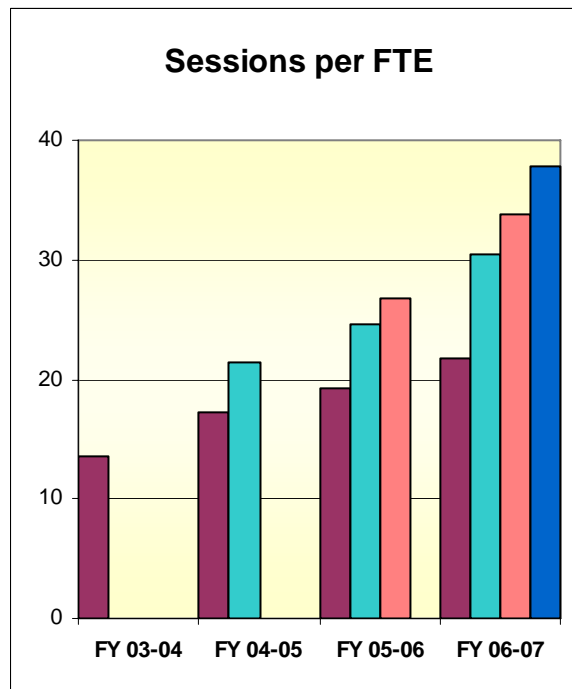
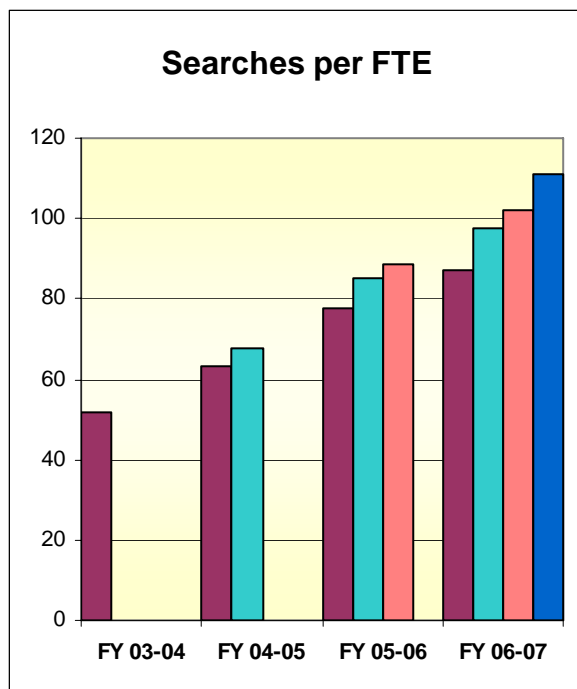
7,000 to 14,000 journals



17,000 journals

Downward trend is less significant (between 0.1 and 0.2)  
and inconsistent for non-priority resources.

# Ratios COUNTER per FTE



Students are progressively increasing their use of constant data sets of electronic resources.

# Web Placement

**HISTORY DATABASES**

Use these general databases to get an **overview** of your topic.

**InfoTrac OneFile** 1980 - present **Full Text**  
Provides comprehensive access to an extensive collection of journals, newspapers, magazines, and newswires. Includes all the fulltext articles available in other InfoTrac databases as well as additional fulltext articles.

**LexisNexis Academic** 1980's - present **Full Text**  
Provides full-text documents from over 5,900 news, business, legal, medical, and reference publications with a variety of flexible search options.

**Wilson OmniFile Full Text Select** 1994 - present **Full Text**  
Provides full text, indexing and abstracts for 1,340 multidisciplinary magazines and journals.


Use the following databases for more **in-depth information** on history topics. To view an alphabetical list of all databases, see [Databases A-Z](#).

**Alternative Press Index** 1991 - present  
Indexes journals covering cultural, economic, political and social change.

**America: History and Life** 1964 - present  
Indexes journal articles on the history of the United States and Canada from prehistory to the present.

With the web redesign in Fall 2004, three multidisciplinary databases were at the top of every listing of databases ...

**HISTORY DATABASES**

**NEW!** Search multiple databases at one time!  **Quick Search**  **GO**

or click here to create your own custom search

To view an alphabetical list of all databases, see [Databases A-Z](#), or to view databases grouped by subject discipline, see [Databases by Subject](#).

**A B C D E F G H I J K L M N O P Q R S T U V W X Y Z**

**Academic OneFile** 1980 - present **Full Text**  
Provides indexing and full-text of peer-reviewed journals in the physical and social sciences, the arts, diversity studies, tourism, business, psychology, homeland security, and other subjects.

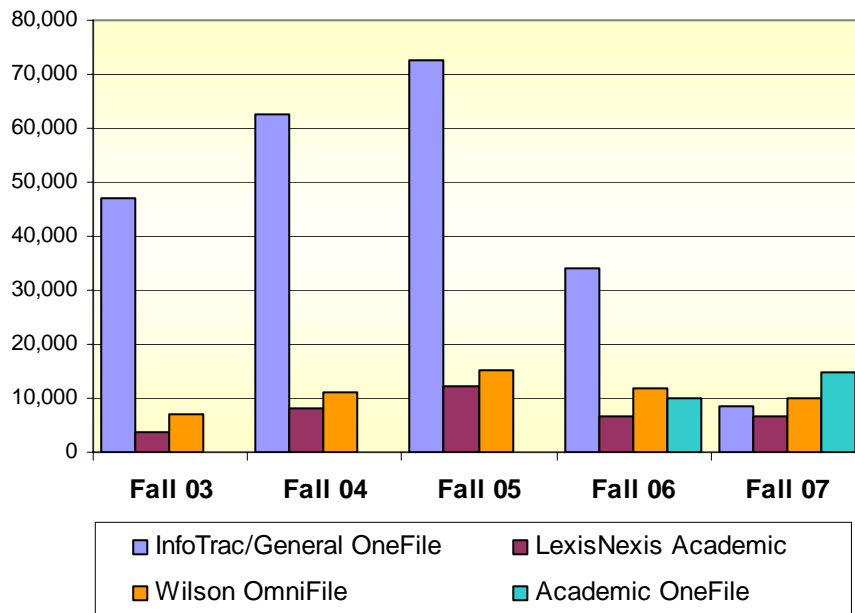
**Alternative Press Index** 1991 - present  
Indexes journals covering cultural, economic, political and social change.

**America: History and Life** 1964 - present  
Indexes journal articles on the history of the United States and Canada from prehistory to the present.

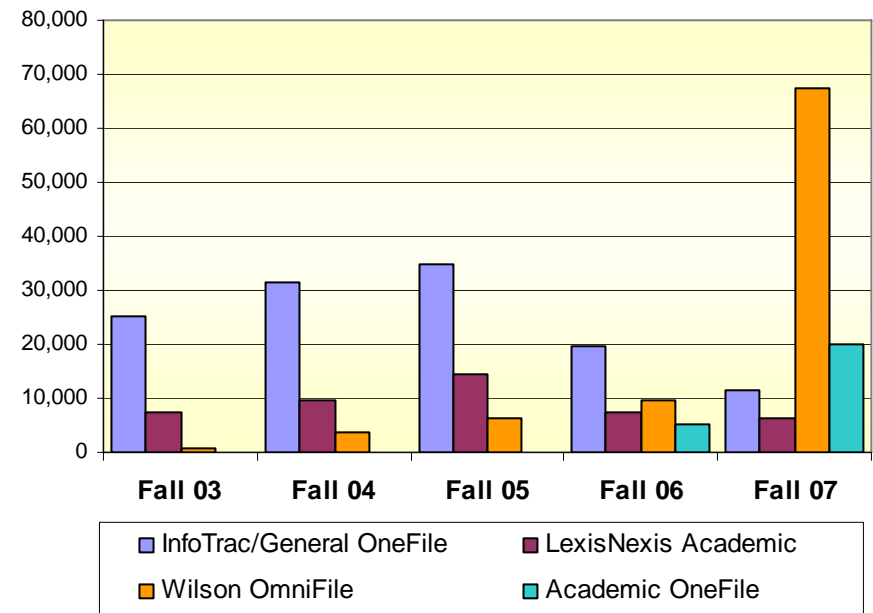
... until Fall 2005, when they were incorporated into a single alphabetical listing.

# Web Placement

**Multidisciplinary Database Searches**



**Multidisciplinary Databases Full Text Downloads**



Both searches and downloads decreased significantly when the multidisciplinary databases were no longer at the top.



# E-Metrics & Library Assessment

- What else do we measure?
  - ☐ Gate count
  - ☐ Circulation activity
  - ☐ Information Commons counts
  - ☐ Reference questions
  - ☐ Interlibrary loan activity
  - ☐ Budget trends
  - ☐ Web site traffic
  - ☐ Qualitative measures

# The Trees and the Forest

“The degree to which electronic use is replacing physical use is important to plot the current and projected trajectory of the academic library.”  
(Martell 2007, 435)

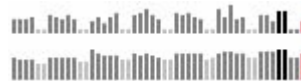


“Innovations in electronic resource functionality will necessitate advances in electronic resource usage measures to describe use meaningfully.”  
(Blecic et al. 2007, 42)

# Sparklines

Sparklines were created by Edward Tufte as small, word-sized graphics that can convey a lot of time-sensitive data in a clean and simple presentation.

See <http://en.wikipedia.org/wiki/Sparkline> and [http://www.edwardtufte.com/bboard/q-and-a-fetch-msg?msg\\_id=0001OR](http://www.edwardtufte.com/bboard/q-and-a-fetch-msg?msg_id=0001OR) for more information about Sparklines, or just Google it.



Columnar Sparklines show trends over time by identifying the high and low values in a common continuum.

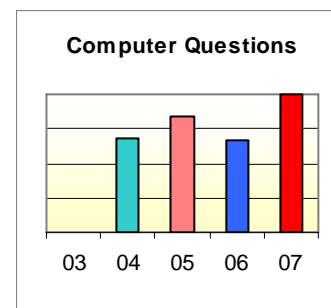
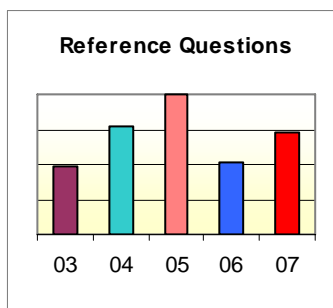
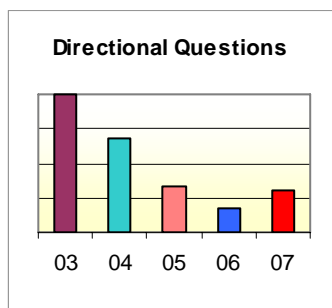
# Sparklines

	Fall 2003	Fall 2004	Fall 2005	Fall 2006	Fall 2007
Directional Questions	2,184	1,493	725	395	669
Reference Questions	1,561	2,458	3,178	1,640	2,318
Computer Questions	0	2,230	2,750	2,156	3,253
<b>TOTAL</b>	<b>3,745</b>	<b>6,181</b>	<b>6,653</b>	<b>4,191</b>	<b>6,240</b>

Each year is a percentage of the largest value in the range.

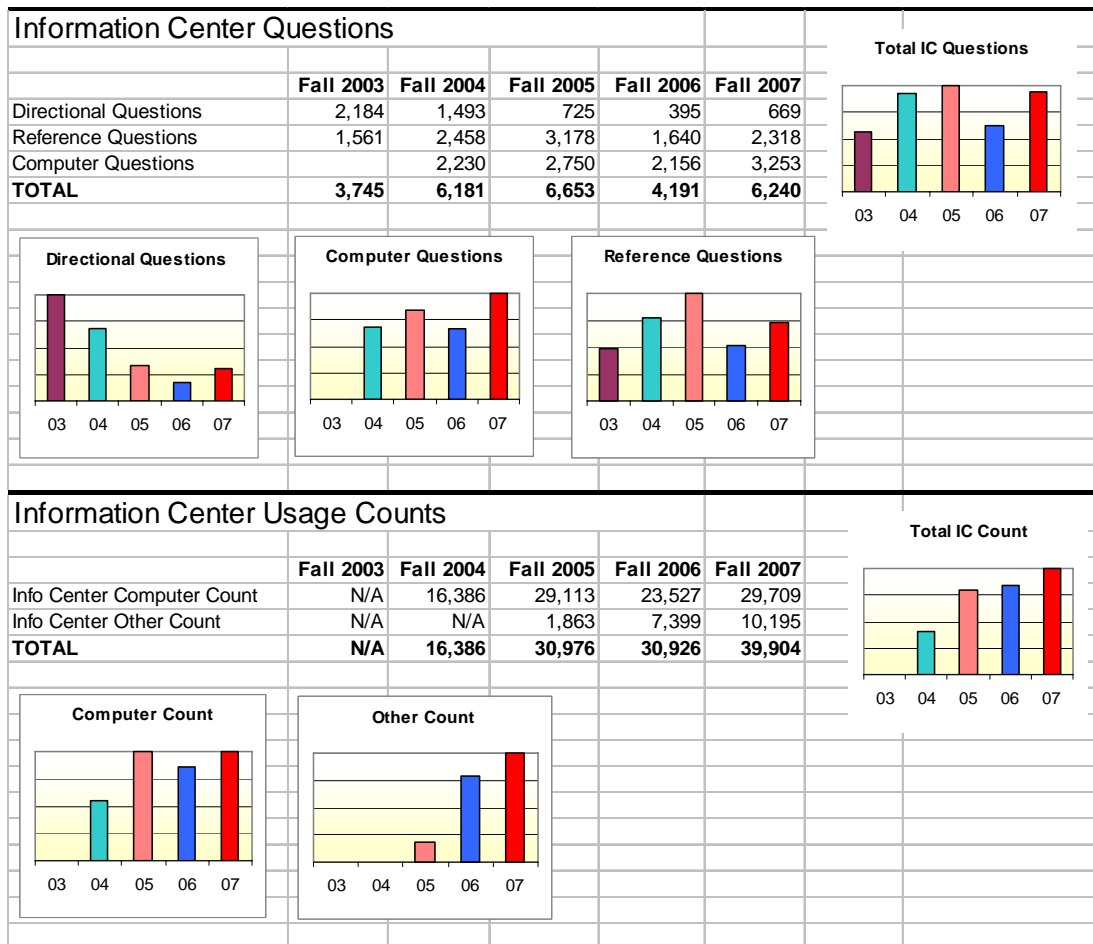
03	04	05	06	07
100%	68%	33%	18%	31%
49%	77%	100%	52%	73%
0%	69%	85%	66%	100%
56%	93%	100%	63%	94%

=B2/LARGE(\$B2:\$F2,1)    =C2/LARGE(\$B2:\$F2,1)    etc.

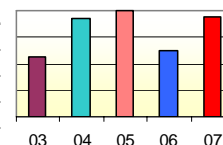


Use a different, consistent color for each year.  
Use constant data sets for electronic resources.

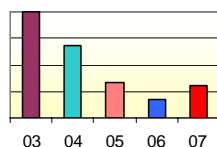
# Sparklines



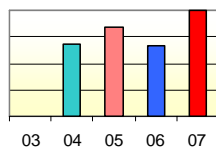
Total IC Questions



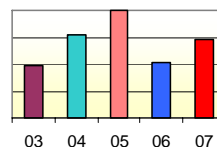
Directional Questions



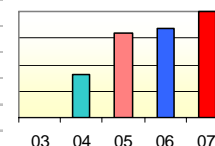
Computer Questions



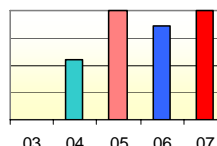
Reference Questions



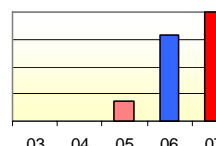
Total IC Count



Computer Count

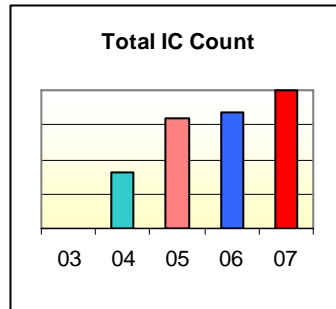
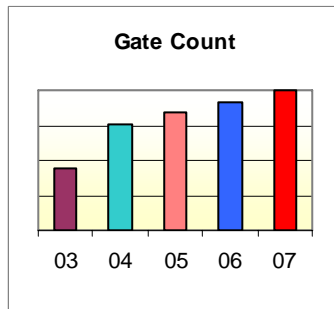


Other Count

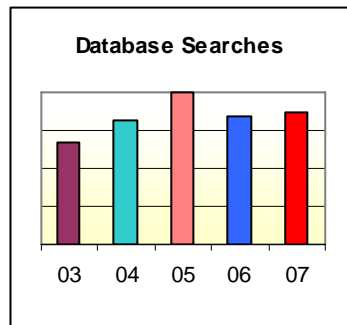
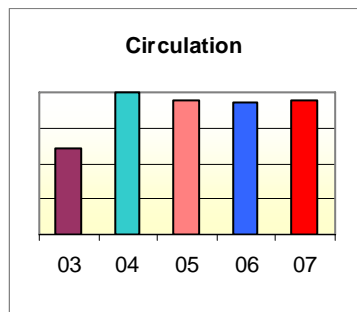


# Sparklines Information Commons

Circulation and gate count increased over 25% in Fall 2004 when the Information Commons opened.

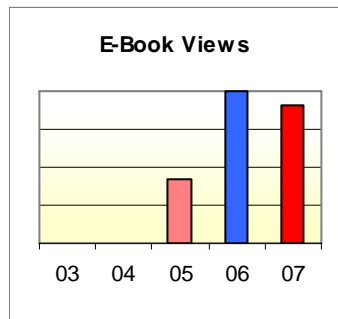
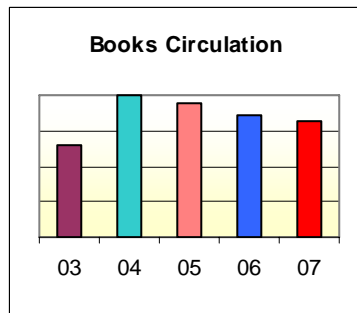
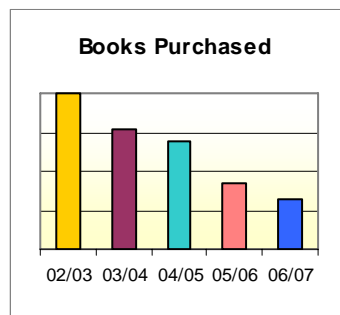


Gate count increased steadily from Fall 2004 to Fall 2007. Information Commons count leveled off after two years.

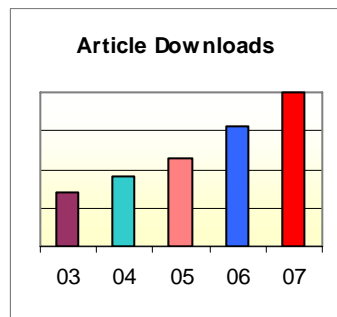
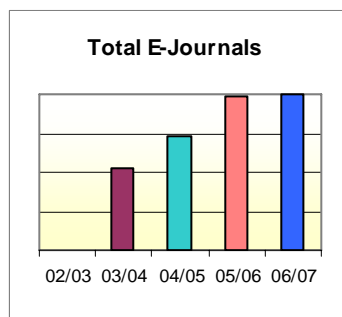
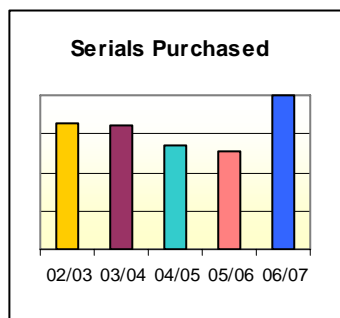


Circulation decreased slightly after the initial jump in Fall 2004, but database searches have held even.

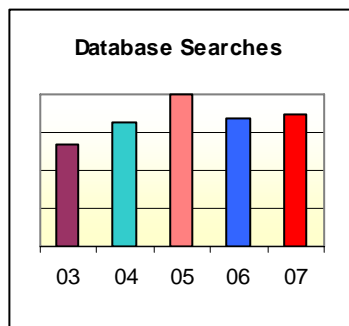
# Sparklines Collections



We are buying fewer books with less book circulation activity, but consider e-book holdings and use.

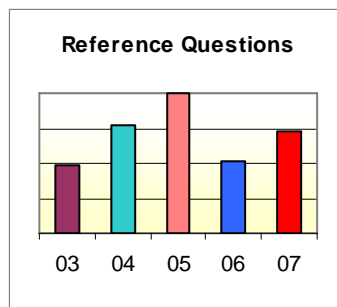
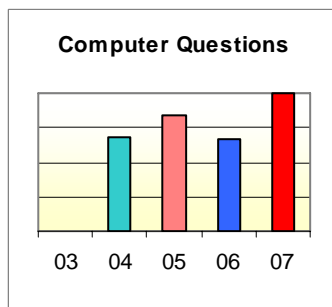


We are buying fewer serials but have access to more e-journals that are steadily increasing in use.

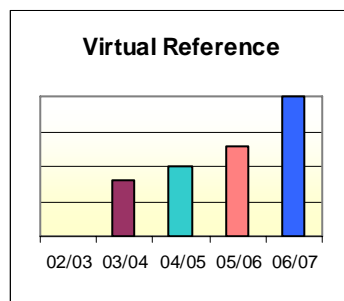


In FY02/03, we spent 55% of the acquisitions budget on serials; in FY06/07, it was 75%. Circulation of monographs has decreased but use of electronic resources (databases and e-journals) has increased.

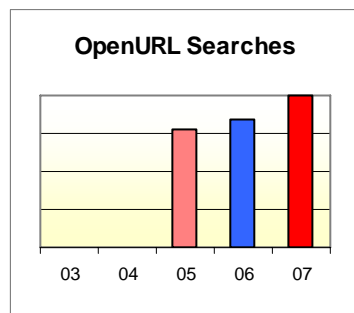
# Sparklines Services



Computer and reference questions decreased in Fall 2006 and then rebounded.



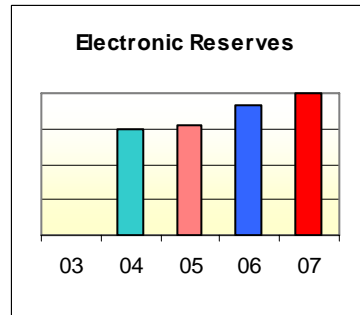
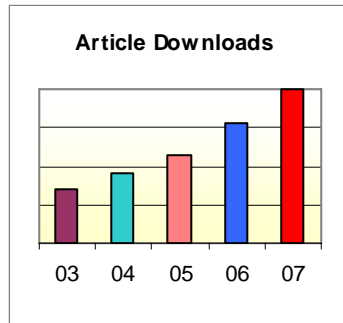
Virtual reference increased more in FY06/07 when online chat was added.



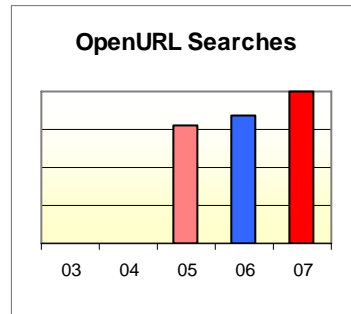
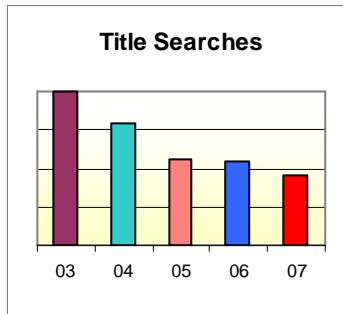
Are there fewer reference questions because the link resolver makes it easier and more seamless to move from database citation to full text?



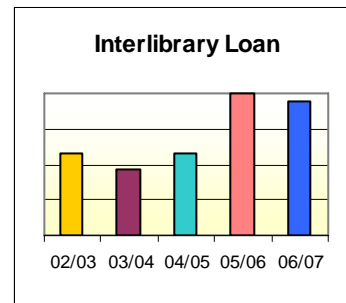
# Sparklines Link Resolver Impact



Article downloads increased steadily, perhaps also related to e-reserve durable URLs.



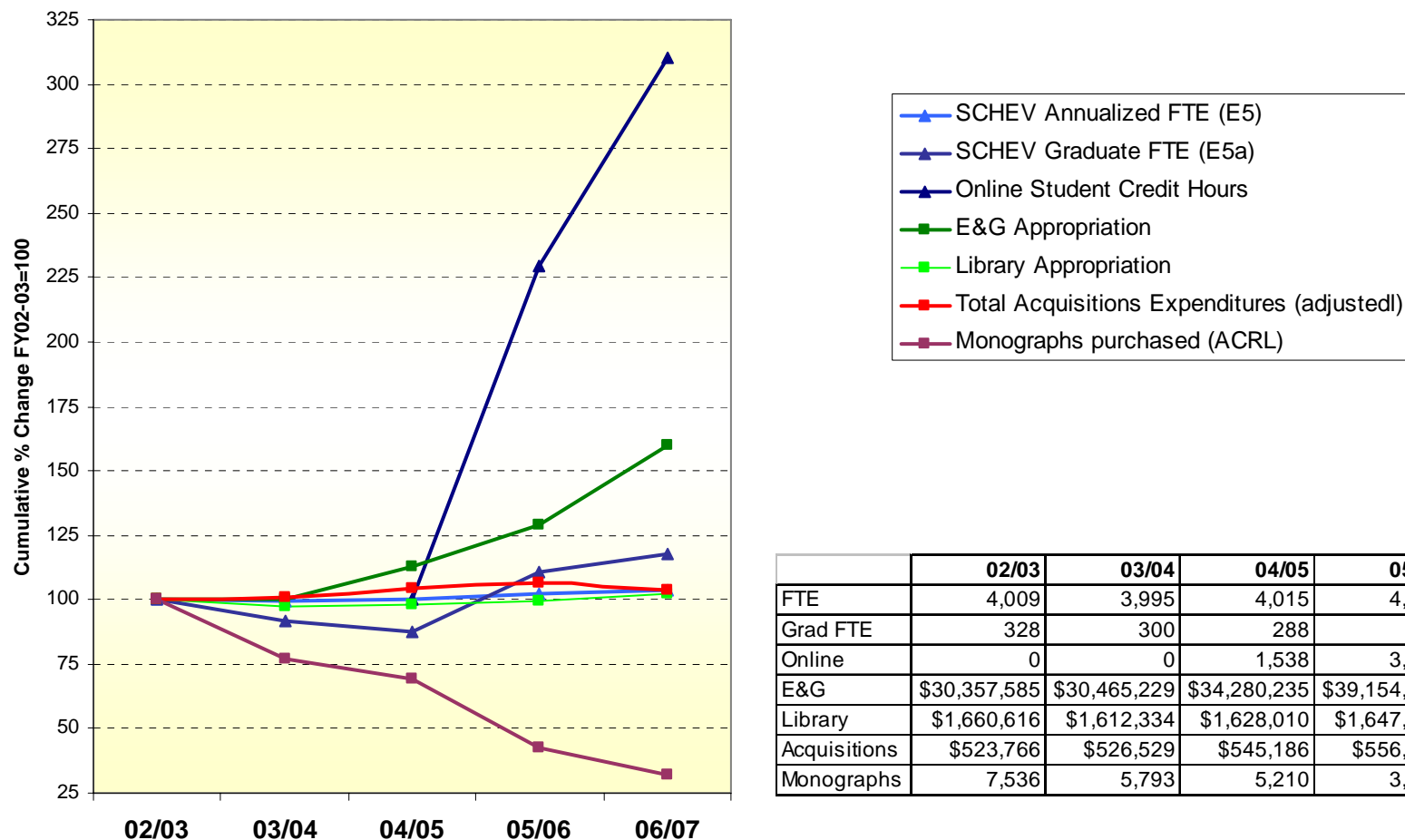
A-Z journal list searches decreased as link resolver searches increased after link resolver was implemented in Fall 2005.



ILL requests increased in FY05/06 when link resolver and ILLiad were in place.

# Budget and Enrollment Trends

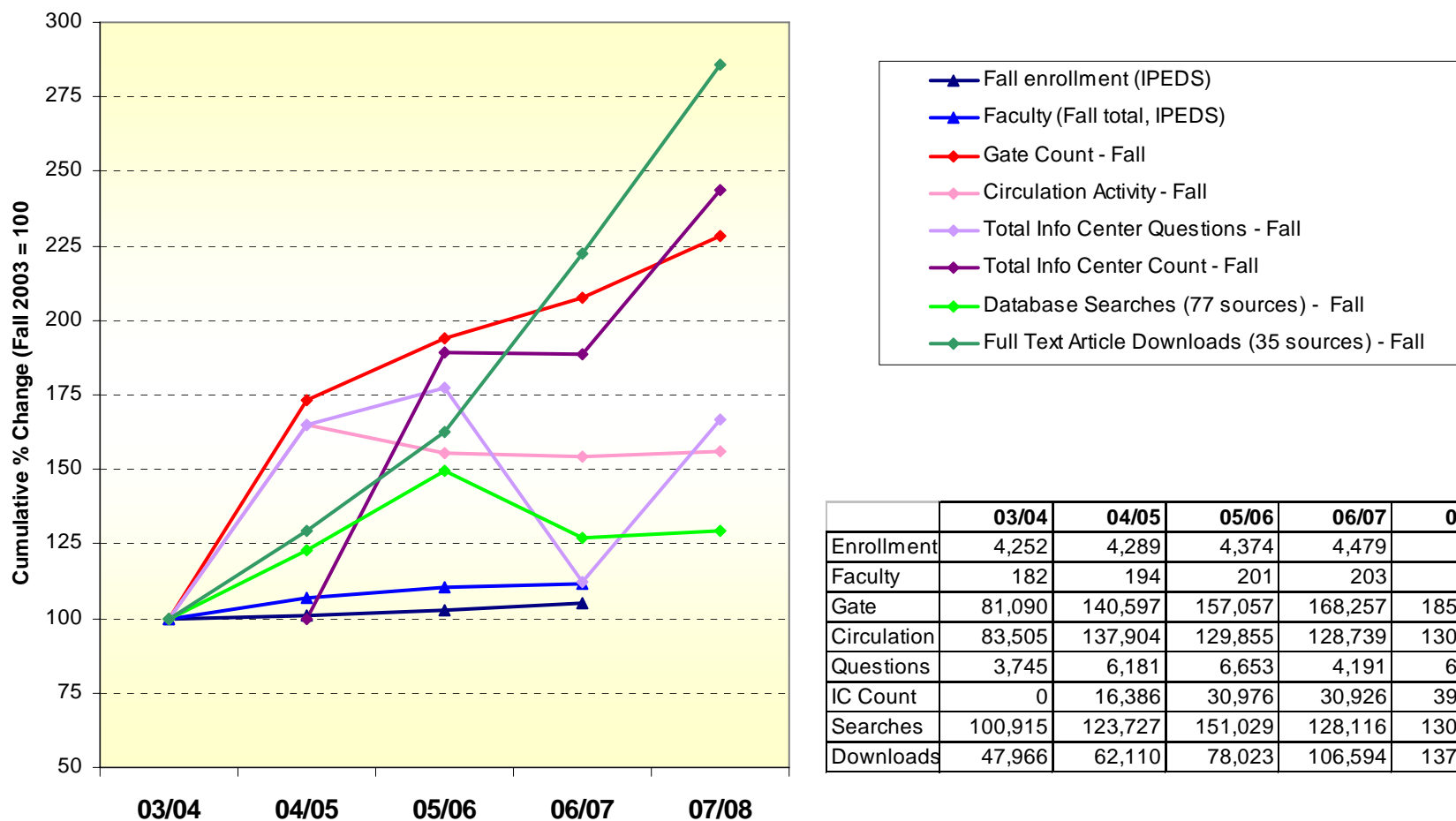
Cumulative Five-Year Trends in Enrollment and Library Budget



	02/03	03/04	04/05	05/06	06/07
FTE	4,009	3,995	4,015	4,099	4,165
Grad FTE	328	300	288	363	386
Online	0	0	1,538	3,529	4,767
E&G	\$30,357,585	\$30,465,229	\$34,280,235	\$39,154,523	\$48,448,273
Library	\$1,660,616	\$1,612,334	\$1,628,010	\$1,647,570	\$1,700,186
Acquisitions	\$523,766	\$526,529	\$545,186	\$556,957	\$542,172
Monographs	7,536	5,793	5,210	3,221	2,434

# Service and Enrollment Trends

Cumulative Five-Year Trends in Service and Enrollment, Fall 2003 to Fall 2007



# Challenges

- Validity
- Time
- Urgency



# Questions?

Virginia Kinman

Electronic Resources Librarian

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# Appendix A – COUNTER Data

## Searches

4 years from 03/04 (77 resources)	3 years with new 04/05 (84 resources)	2 years with new 05/06 (97 resources)	1 year with new 06/07 (102 resources)
--------------------------------------	--	--	--

FY 03-04	% chg	FY 04-05	% chg	FY 05-06	% chg	FY 06-07	Fall 03	% chg	Fall 04	% chg	Fall 05	% chg	Fall 06	% chg	Fall 07
207,249	22.3%	253,418	25.7%	318,646	13.9%	363,078	100,915	22.6%	123,727	22.1%	151,029	-15.2%	128,116	1.8%	130,390
		270,909	28.5%	348,101	16.5%	405,536			131,741	27.8%	168,349	-17.6%	138,649	6.0%	147,011
				364,243	16.7%	425,061					175,531	-16.3%	146,933	7.6%	158,170
						462,514							159,118	9.9%	174,876

## Sessions

4 years from 03/04 (31 resources)	3 years with new 04/05 (60 resources)	2 years with new 05/06 (76 resources)	1 year with new 06/07 (86 resources)
--------------------------------------	--	--	---

FY 03-04	% chg	FY 04-05	% chg	FY 05-06	% chg	FY 06-07	Fall 03	% chg	Fall 04	% chg	Fall 05	% chg	Fall 06	% chg	Fall 07
54,470	27.5%	69,428	13.3%	78,663	14.8%	90,275	27,091	32.5%	35,900	16.2%	41,698	-18.2%	34,122	-12.8%	29,765
		86,062	17.3%	100,933	25.5%	126,686			43,857	18.9%	52,129	-11.3%	46,255	-7.2%	42,940
				109,526	28.5%	140,722					55,857	-9.0%	50,805	2.4%	52,039
						157,820							56,946	21.7%	69,323

## Downloads

4 years from 03/04 (31 resources)	3 years with new 04/05 (60 resources)	2 years with new 05/06 (76 resources)	1 year with new 06/07 (86 resources)
--------------------------------------	--	--	---

FY 03-04	% chg	FY 04-05	% chg	FY 05-06	% chg	FY 06-07	Fall 03	% chg	Fall 04	% chg	Fall 05	% chg	Fall 06	% chg	Fall 07
109,636	18.5%	129,958	13.7%	147,811	24.2%	183,617	47,966	29.5%	62,110	25.6%	78,023	36.6%	106,594	28.7%	137,162
		133,440	17.9%	157,379	22.2%	192,270			63,784	31.0%	83,543	32.4%	110,645	29.4%	143,186
				166,051	23.0%	204,258					87,191	31.7%	114,809	33.8%	153,665
						221,754							122,117	43.1%	174,690